**DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

# WELDING INSPECTION REPORT

**Resident Engineer:** Pursell, Gary
**Address:** 333 Burma Road
**City:** Oakland, CA 94607

**Report No:** WIR-000564
**Date Inspected:** 02-Oct-2007

**Project Name:** SAS Superstructure
**Prime Contractor:** American Bridge/Fluor Enterprises, a JV
**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

**OSM Arrival Time:** 2330
**OSM Departure Time:** 800
**Location:** Shanghai, China

| | | | |
|---|---|---|---|
| **CWI Name:** | Xu Lefeng & Hua Li Wen | **CWI Present:** | ☑ Yes ☐ No |
| **Inspected CWI report:** | ☐ Yes ☐ No ☑ N/A | **Rod Oven in Use:** | ☐ Yes ☐ No ☑ N/A |
| **Electrode to specification:** | ☑ Yes ☐ No ☐ N/A | **Weld Procedures Followed:** | ☑ Yes ☐ No ☐ N/A |
| **Qualified Welders:** | ☑ Yes ☐ No ☐ N/A | **Verified Joint Fit-up:** | ☑ Yes ☐ No ☐ N/A |
| **Approved Drawings:** | ☑ Yes ☐ No ☐ N/A | **Approved WPS:** | ☑ Yes ☐ No ☐ N/A |
| | | **Delayed / Cancelled:** | ☐ Yes ☑ No ☐ N/A |

**Bridge No:** 34-0006
**Component:** Caltrans Mockup

**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mike Hasler was present to observe the fitup, welding and related activities associated with the fabricating of Caltrans Mock-up, 77M, 89M and 114M, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

| Item | Description | WBS | Dwg No. | Status |
|---|---|---|---|---|
| 1 | Skin Plate A (interior conn. plate) | NA | NA | Work in Progress |

Mock-Up 114M, Skin Plate A (interior connection plate): Caltrans QA Inspector observed flux cored arc welding (FCAW) in progress at stiffener plate, p268, weld map weld number 2, A side to skin plate A58, complete joint penetration (CJP), double bevel T-joint weld. The welder was observed welding cover pass weld in the horizontal position. The welder is identified as Mr. Chang Chuancang, welder stamp 053870. The welder is using welding procedure specification WPS-B-T-2232-TC-U5-F, Revision 1. Caltrans QA Inspector observed ZPMC Quality Control (QC) Certified Welding Inspector (CWI) Mr. Xu Lefeng and Bureau Veritas inspector, Mr. Hua Li Wen monitoring welding activities at the workstation. Caltrans QA Inspector measured current welding parameters at approximately 300 amps, 31.6 volts and 430 millimeters per minute (mm/min) travel speed. Preheat and interpass temperatures were verified during welding activities. The preheat temperature prior to the start of welding measures more than 110 Celsius (230 degree Fahrenheit) but less than 232 Celsius (450 degrees Fahrenheit) during maximum interpass temperature verification. FCAW consumable is verified and identified as Supercored 71H, classification E71T-1, diameter 1.4 mm (.055 inches). The following digital pictures illustrate welding in progress in progress.


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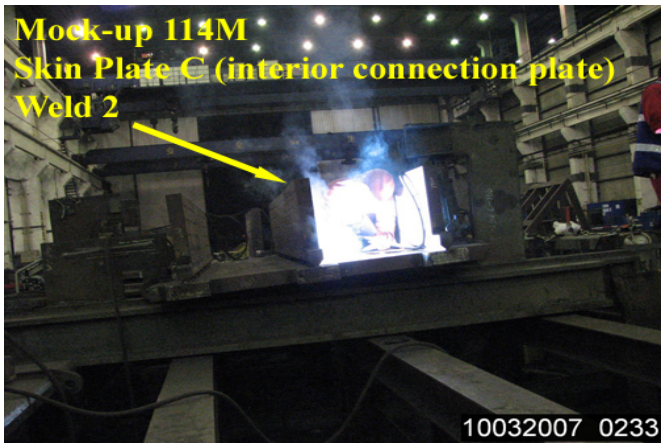
|---|---|---|---|---|
| 2 | Skin Plate C (interior conn. plate) | NA | NA | Work in Progress |

Mock-Up 114M, Skin Plate C (interior connection plate): Caltrans QA Inspector observed flux cored arc welding (FCAW) in progress at stiffener plate, p920-9, weld map weld number 2, B side to skin plate A67, complete joint penetration (CJP), double bevel T-joint weld. The welder was observed welding root pass weld in the horizontal position. The welder is identified as Mr. Chang Chuancang, welder stamp 053870. The welder is using welding procedure specification WPS-B-T-2232-TC-U5-F, Revision 1. Caltrans QA Inspector observed ZPMC Quality Control (QC) Certified Welding Inspector (CWI) Mr. Xu Lefeng and Bureau Veritas inspector, Mr. Hua Li Wen monitoring welding activities at the workstation. Caltrans QA Inspector measured current welding parameters at approximately 290 amps, 31.7 volts and 310 millimeters per minute (mm/min) travel speed. Preheat and interpass temperatures were verified during welding activities. The preheat temperature prior to the start of welding measures more than 110 Celsius (230 degree Fahrenheit) but less than 232 Celsius (450 degrees Fahrenheit) during maximum interpass temperature verification. FCAW consumable is verified and identified as Supercored 71H, classification E71T-1, diameter 1.4 mm (.055 inches). The following digital pictures illustrate welding in progress in progress.




**Summary of Conversations:**

As idenified within the contents of this report.

**Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

# WELDING INSPECTION REPORT

*( Continued Page 3 of 3 )*

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|---|---|---|
| **Inspected By:** | Hasler,Mike | Quality Assurance Inspector |
| **Reviewed By:** | Cuellar,Robert | QA Reviewer |